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REMARKS

Claims 1-22 are pending in the above-identified application. Claims 7-13 have been allowed. Claims 21 and 22 are objected to, but otherwise allowable. Claims 1, 4-6, 14, 17-20 are rejected as being anticipated under 35 U.S.C. §102. Claims 2, 3, 15, 16 are rejected as obvious under 35 U.S.C. §103. Claims 1, 14, 21 and 21 have been amended to further clarify the subject matter therein. No new matter has been added. Support for the amendments can be found throughout the above-identified application including the claims as originally filed.

I. OBJECTIONS

Claim 8 is objected to because the Examiner states that the "or " in line 4 should be "and." Applicant adopts the Examiner's suggestion, as shown in amended claim 8.

Claims 21 and 22 are objected to as being dependent upon a rejected base claim, but the Examiner states that the claim would be allowable if rewritten in independent form. Applicant adopts the Examiner's suggestion and amends claims 21 and 22 to include the limitations of base claims 20 and 14.

Claims 8, 21 and 22 are now in condition for allowance and Applicant respectfully requests that objections for these claims be withdrawn.

II. REJECTION UNDER §102(b)

Claims 1, 4-6, 14, 17-20 stand rejected under 35 U.S.C. §102(b) as being anticipated by Balshusemann (DE 4112168). The Examiner further notes that an English language translation of this patent is not currently available to the Examiner. Applicant respectfully traverses for at least the reasons below.

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The Balshusemann reference does not disclose each and every limitation of the claims as amended. For example, Balshusemann does not disclose a non-stacking polyacrylamide gel and a Tris(hydroxymethyl)aminomethane buffer titrated to a pH between 6.5 and 7.5, as recited in amended claims 1, 4-6, 14, 17-20. The disclosure cited by the Examiner refers to a *sammelgel*, or "stacking" gel at pH 6.7. This stacking gel disclosed in Balshusemann causes the sample to concentrate at the interface of the stacking gel and the resolving gel. The stacking gel in this reference typifies the characteristics of other known stacking gels that do not separate the applied sample, but merely concentrate the sample before contacting the resolving gel. (Specification, pg. 2, ln. 27-29.) By contrast, amended claims 1, 4-6, 14, 17-20 describe a non-stacking gel capable of separating a sample.

As another example, the resolving gel, *trenngel*, is the portion of the system disclosed in Balshusemann that contains separating properties, and it operates at a pH of 7.6. This also falls outside the scope of the present claims. The separating polyacrylamide gel recited in claims 1, 4-6, 14, 17-20 separate samples in the presence of buffer at a pH between 6.5-7.5, which is not disclosed in Balshusemann.

The Office Action states that shelf life of the recited gel is inherently disclosed in Balshusemann. As stacking gels by their very nature do not have separating properties, the stacking gel disclosed in Balshusemann can not inherently have the same separating properties recited in claims 1, 4-6, 14, 17-20 describing a separating polyacrylamide gel capable of separating a sample into separate component parts utilizing a buffer system comprising a non-stacking polyacrylamide gel. The Office Action further states that the definition of shelf-life is very broad because there is no quantifiable measure of "acceptable" and protein separations depend on several other factors than gel composition. However, the Specification clearly

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discloses that stability is quantifiably measured by comparing the migration distance of known proteins under known conditions. (Specification, 9-10.) Because the known migration distances are also dependent on specific, disclosed conditions such as applied electrophoresis field, sample preparation, type of protein, etc, operating under these same disclosed conditions during stability tests provide similar known migration distances by which to compare.

For at least these reasons, Applicant respectfully requests that rejection on this basis be reconsidered and withdrawn.

III. REJECTION UNDER §103(a)

Claims 2, 3, 15 and 16 stand rejected under 35 U.S.C. §103(a) over Balshusemann in view of Starzec et al, Wadstrom et al. and the chemical abstract of Rosengren et al. Applicants respectfully traverse for at least the reasons below.

The Office Action states that the pH conditions disclosed in the cited references are applicable to the pH ranges recited in the present claims. However, each cited reference discloses different gel conditions that make separation at that pH possible that are not present in the recited claims. For example, the pH optimization taught in Rosengren refers to isoelectric focusing techniques rather than gel electrophoresis, and requires the use of Ampholine™, an ampholytic buffer with significantly different properties than Tris(hydroxymethyl)aminomethane. Like Rosengren, the Wadstrom reference is related to isoelectric focusing, requiring the use of carrier ampholytes for separation. Isoelectric focusing is a separation technique dependent on the pI of the sample in addition to the size and weight of the sample, as in gel electrophoresis. As such, these disclosures for isoelectric focusing techniques are inapplicable to the present application.

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As another example, the cited disclosure in Starzac merely discloses that the sample is concentrated in a stacking gel composed of 15% glycerol, 5 mM EDTA, and .125 M Tris-HCL at pH 6.8, much like Balshusemann. However, the actual separation is conducted according to Laemmli and Favre at a much higher pH, (Starzac, pg. 355 and Starzac reference 11), similar to the SDS methods already described by Laemmli in the Specification (Specification, pg. 2, ln. 22-30.) For at least these reasons, the cited references do not teach, motivate, or suggest all the limitations recited in claims 2, 3, 15 and 16, and Applicant respectfully requests that rejection on this basis be reconsidered and withdrawn.

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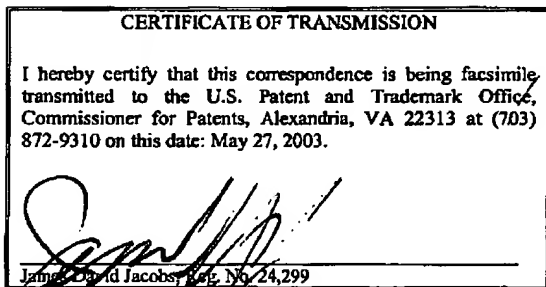
CONCLUSION GROUP 1700

This communication is believed to be fully responsive to the Office Action and in condition for allowance. The claims, in view of the foregoing explanation, are believed to be patentable over the prior art, and a favorable Office Action is hereby requested.

If a telephone interview would be of assistance in advancing prosecution of the subject application, the Examiner is requested to telephone the undersigned at the number provided below.

Dated: May 27, 2003

Respectfully submitted,



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